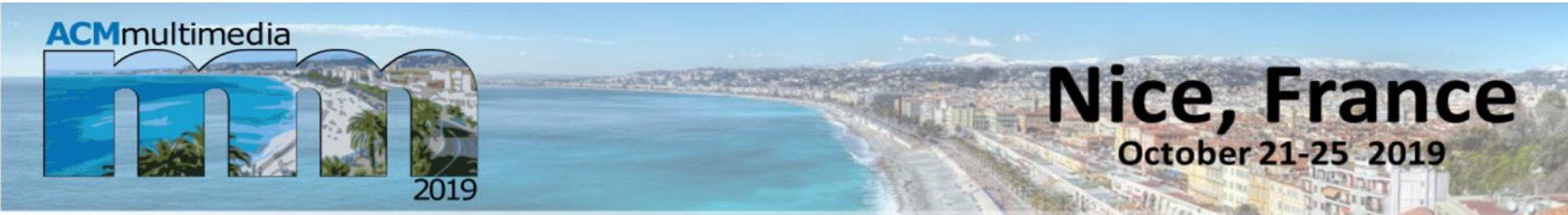

Duet Robust Deep Subspace Clustering

Yangbangyan Jiang[1,2], Qianqian Xu[3], Zhiyong Yang[1,2],
Xiaochun Cao[1,2], Qingming Huang[2,3,4*]

[1]Institute of Information Engineering, CAS, Beijing, China
[2]University of Chinese Academy of Sciences, Beijing, China
[3]Institute of Computing Technology, CAS, Beijing, China
[4]BDKM, CAS, Beijing, China

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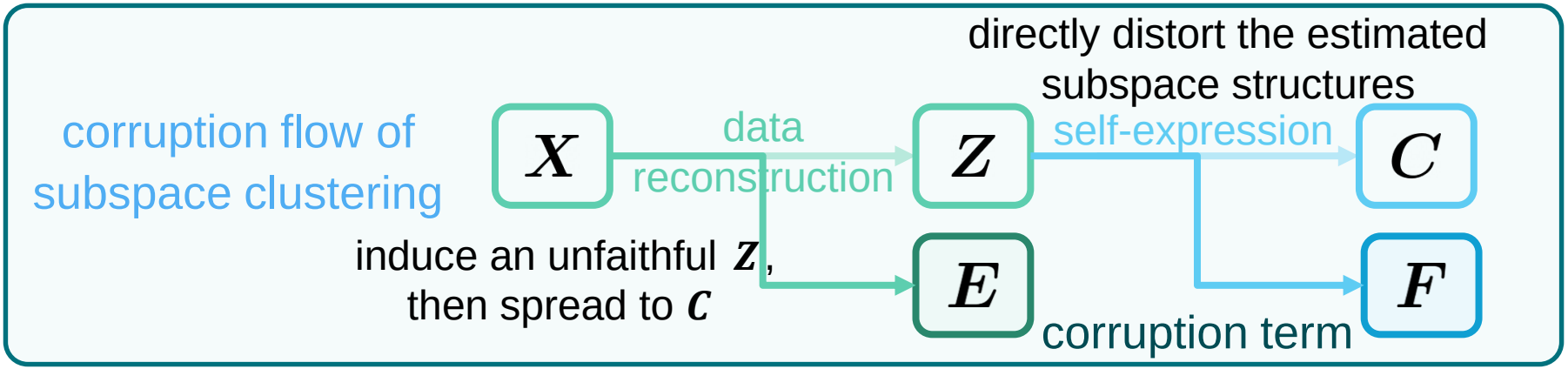
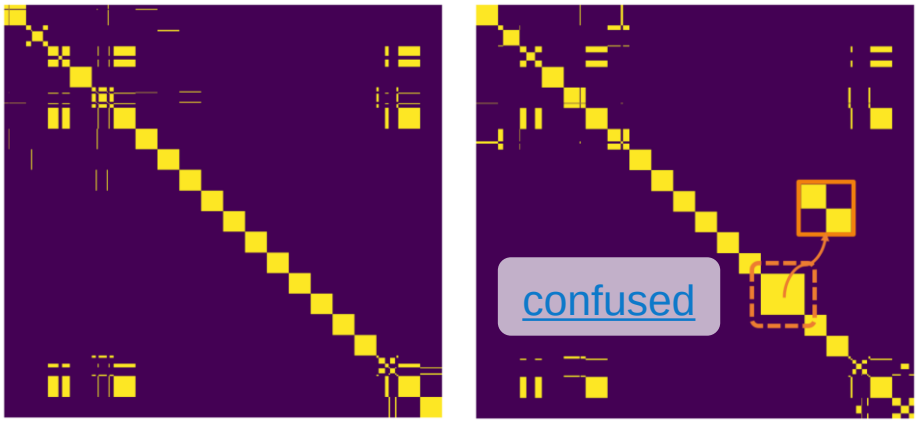
Innovation and Contribution

- Aim – to improve the robustness of subspace clustering methods



- A robust deep subspace clustering framework, which explicitly models the corruptions of both data construction and latent self-expression for a double-assurance of robustness.
- Smoothing for norms in the corruption terms, yielding an end-to-end differentiable network while hardly hurting the performance.

Findings and Conclusion



Ours DSC-Net (NIPS17)

Indicator matrix on COIL20

- On three benchmark datasets, our proposed method outperforms the competitors.
- In the orange boxed region, DSC-Net completely confuses two clusters and merge them as one, while our DRDSC could still preserve the correct structure.
- The two-fold explicit noise modeling scheme indeed prevents the model from being distorted by corruptions.